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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/598,240

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Mitsuma Matsuda

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11/16/2009

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EXAMINER

WIESE, NOAH S

ART UNIT

PAPER NUMBER

1793

NOTIFICATION DATE

DELIVERY MODE

11/16/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentmail@whda.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/598,240	<b>Applicant(s)</b> MATSUDA, MITSUMA	
	<b>Examiner</b> NOAH S. WIESE	<b>Art Unit</b> 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 August 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 10 and 11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 9 and 12 is/are rejected.
- 7) ☒ Claim(s) 7 and 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***Status of Application***

1. Acknowledgement is made of amendments filed 08/10/2009. Upon entering the amendments, the claims 1-3 are amended and claims 4-12 are added.

***Election/Restrictions***

2. Newly submitted claims 10-11 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: the claims are drawn to a method of making a coloration agent by using shot waste. As discussed in the previous office action, a coloration agent made from a mixture of metal and metal oxide raw materials would be equivalent to one wherein the mixture resulted from shot waste. Thus, the specification in the product claims that the material is shot waste is a product-by-process limitation, and does not hold patentable weight in distinguishing the claims over the equivalent prior art agent. That an equivalent agent could be made from a method patentably distinct from that of instant claims 10-11 shows that the newly filed invention is distinct from that elected by original disclosure (the product claims).

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 10-11 withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

***Rejections Withdrawn***

3. Claims 1-3 have been amended to overcome the 112 indefiniteness rejections set forth in the previous office action. Therefore, these grounds of rejection have been withdrawn.

***Claim Rejections - 35 USC § 102***

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1-2 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Mitchell et al (US 5294513).

Regarding **claims 1-2**, the claims are drawn to a coloration agent that is comprised of metal powder and a metal oxide powder contained in the metal powder. The limitation that states the coloration agent is for use in ceramic articles is an intended use for the claimed product, and thus does not hold patentable weight. The source for the metal powder is a product-by-process limitation because the mere statement that the powder is from a certain source does not impart structural or compositional limitations on the powder. Therefore, the claimed coloration agent is understood to be a mixture of metal powder and metal oxide powder. Mitchell et al teaches encapsulated toner particles wherein said particles comprise a powder mixture that can comprise iron powder and iron oxide powder (see column 4, lines 33-42). Thus, Mitchell et al teaches a coloration agent (toner) that comprises a mixture of iron oxide and iron metal. As discussed above, this meets the limitations of claims 1 and 2, and thus the claims are anticipated by Mitchell et al.

Regarding **claim 4**, as discussed above, the mixture of metal oxide powder and metal powder taught by Mitchell et al is iron metal and iron oxide.

6. Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Lewis et al (US 2003/0051580).

Regarding **claims 1 and 5**, Lewis et al teaches a process for producing a mixture of copper metal powder and copper oxide powder (see paragraphs 0019 and 0040) that is used as a pigment (see paragraph 0016). As discussed above, the claims are drawn to a coloration agent that is comprised of metal powder and a metal oxide powder contained in the metal powder. The limitation that states the coloration agent is for use in ceramic articles is an intended use for the claimed product, and thus does not hold patentable weight. The source for the metal powder is a product-by-process limitation because the mere statement that the powder is from a certain source does not impart structural or compositional limitations on the powder. Therefore, the claimed coloration agent is understood to be a mixture of metal powder and metal oxide powder. Lewis et al meets the limitations of instant claims 1 and 5, and the claims are thus anticipated by the prior art.

7. Claims 1, 6, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Lee et al (US 6342461).

Regarding **claims 1 and 6**, Lee et al teaches a ceramic composition comprising clay and waste materials that can include aluminum dross (see Abstract and column 2, lines 36-47). Aluminum dross is a mixture of aluminum metal and aluminum oxide powders (see column 5, lines 35-38). The aluminum dross would act as a colorant when mixed with the clay components of the Lee et al ceramic. As discussed above, the claims are drawn to a coloration agent that is comprised of metal powder and a metal oxide powder contained in the metal powder. The limitation that states the coloration agent is for use in ceramic articles is an intended use for the claimed product, and thus

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does not hold patentable weight. The source for the metal powder is a product-by-process limitation because the mere statement that the powder is from a certain source does not impart structural or compositional limitations on the powder. Therefore, the claimed coloration agent is understood to be a mixture of metal powder and metal oxide powder. Lee et al meets the limitations of instant claims 1 and 6, and the claims are thus anticipated by the prior art.

Regarding **claim 9**, Lee et al teaches that the clay composition includes electric arc furnace (EAF) dust along with the aluminum dross (see claim 4) and that the EAF dust contains chromium oxide and manganese oxide (see Table 1).

### ***Claim Rejections - 35 USC § 103***

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frame (US 5278111) in view of Strange (US 4369062).

Regarding **claims 1-2**, Frame teaches a process for producing brick (ceramic) by mixing electric arc furnace dust with clay materials (see Abstract and claim 1). Frame teaches that the electric arc furnace (EAF) dust is from the manufacture of steel and thus comprises a high iron content (see Table 1). Frame teaches that the use of the EAF dust imparts significant advantages such as increased density and the reduction of waste. Frame also teaches that use of the metal waste dust imparts uniform color throughout the brick body, indicating that the metal waste dust acts as a coloration agent (see column 6, lines 1-8).

The instant claims differ from Frame because Frame teaches that the coloration agent comprises a metal powder derived from electric arc furnace dust and not from shot waste. However, it would have been obvious to one of ordinary skill in the art to modify Frame in view of Strange in order to use shot waste in place of EAF dust because Strange teaches a process for forming clay products using said shot waste.

Strange teaches a method of using shot waste by mixing iron dust separated from shot waste with clay to form briquettes (see Abstract and column 2, lines 10-17). The Strange teachings would indicate to one of ordinary skill that shot waste was known as a material that could be advantageously reused by creating materials mixed with clay. Because Strange teaches a similar process of mixing the waste with clay as Frame teaches, one of ordinary skill would have understood that the shot waste could be used as an equivalent metal waste material to produce equivalent and expected results in the Frame bricks (ceramics). When substituting shot waste into the Frame bricks, it would act as a coloration agent in the same manner as the EAF dust. Therefore, a coloration agent as disclosed in instant claims 1-2 is obvious and not patentably distinct over the teachings of Frame in view of Strange.

Regarding **claim 3**, as discussed above, Frame in view of Strange teaches a clay raw material mixed with a coloration agent that meets the limitations of instant claims 1 and 2. The clay/coloration agent would be a color developed clay. Frame teaches that the EAF dust (coloration agent) is added to the clay material in an amount of less than 60 wt% (see column 3, lines 45-51). This range overlaps the instantly claimed range.

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Per MPEP 2144.05, in the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists.

10. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al (US 6342461).

Regarding **claim 3**, as discussed above, Lee et al teaches a clay containing 5-15 wt% aluminum dross. As also discussed above, this is equivalent to a shot waste material. Thus, claim 3 is obvious and not patentably distinct over the teachings of Lee.

11. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al (US 6342461) in view of Harrison (US 5268131).

Regarding **claim 12**, the claim differs from Lee et al as applied above because Lee does not teach that the clay used in the composition is kaolinite. However, it would have been obvious to one of ordinary skill in the art to modify Lee et al in view of Harrison in order to use kaolinite as the clay material because Harrison teaches that this clay is advantageously used in similar process of converting waste material into a ceramic product. Harrison teaches of producing a ceramic product from waste products such as fly ash (see Abstract). This is similar to the method taught by Lee and discussed above. Harrison teaches that kaolinite is a useful clay for the process (see column 4, lines 5-7). One of ordinary skill would have been motivated to use kaolinite in the Lee product because while Lee gives a clay composition, no specific commercial name for an appropriate clay is taught. One would find such information in the teachings of Harrison. As kaolinite has a similar composition to the clay taught by Lee, one would

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recognize that it is an equivalent clay that could be used to produce equivalent and expected results. Therefore, claim 12 is obvious and not patentably distinct over the prior art of record.

### ***Allowable Subject Matter***

12. Claims 7-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art, either alone or in combination, fails to teach a colorant comprising a metal powder that is composed of 70-80 wt% iron along with containing a metal oxide powder. The prior art also fails to teach a colorant comprising a metal powder that is composed of 60-65 wt% ferric oxide powder.

### ***Response to Arguments***

13. Applicant's arguments filed 08/10/2009 have been fully considered but are not persuasive.

Applicant argues that because the Mitchell toner particles comprise a hydrophobic shell, they do not read on instant claims 1-2. However, the instant claims are written using open "comprising" language, and thus encompass products containing the components of the claim along with any other component. As such, a prior art coloration agent containing the components of the instant claim along with other components (such as a hydrophobic shell) read on the claims. Therefore, this line of argument is not persuasive.

Applicant further argues with respect to the rejection over Frame in view of Strange that because Strange contains less of the clay component than is present in the instant claims, the instant claims are non-obvious. However, Strange was only used in the previously issued rejection to show that EAF dust and shot waste can be used equivalently as recycled waste products in clay-containing ceramic articles. Frame teaches waste product (EAF dust or shot waste) in amounts that overlap the instantly claimed ranges. Because Strange was used to show the equivalency of the two components, and not to show proportions of waste product to clay, this line of argument is not persuasive.

For the above reasons, the grounds of rejection previously issued are maintained.

### ***Conclusion***

14. All the pending claims are rejected.

15. Applicant's arguments are not persuasive, and the previously issued grounds of rejection are maintained for the previously presented claims. Therefore, **THIS ACTION IS MADE FINAL.**

16. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to NOAH S. WIESE whose telephone number is (571)270-3596. The examiner can normally be reached on Monday-Friday, 7:30am-5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Noah Wiese  
05 November 2009  
AU 1793

/Karl E Group/  
Primary Examiner, Art Unit 1793